

# WEATHERING THE STORM

“Troubled by world events  
and uneasy about the future,  
we are searching for answers.”

A GUIDE

R. MICHAEL CONLEY

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# INTRODUCTION

“We are on a collision course  
with a perfect storm  
and we don’t see it coming”

## **Weathering the Storm**

The phrase *the perfect storm*, originating in Sebastian Junger’s book of the same name, describes a confluence of powerful forces that produce a catastrophic event. We are now on a collision course with such a storm, but we don’t see it coming. Caught in the storm’s vortex, we find ourselves in a twilight zone of uncertainty. Troubled by world events and uneasy about the future, we are searching for answers.

In this guide I will share some things I have learned about the looming storm and offer suggestions for surviving it. I hope that it will help you think through your approach to the storm.

# MY AWAKENING

My journey started years ago as a casual kitchen-table conversation with my sister and brother-in-law. It evolved into a life-changing event. They mentioned “peak oil,” a geologic term describing how oilfield production followed a bell-shaped curve that peaked and then declined once about half the field’s reserves were depleted—a condition, they claimed, that would soon lead to a permanent decline in global oil production.

I dismissed it as a half-baked idea that new technology could surely overcome. But later my curiosity grew, and I thought it might be worth exploring for potential investment opportunities. I quickly discovered, to my horror, that peak oil was not only a threat, it was imminent. Furthermore, it was only the tip of the iceberg.

Continuing my peak-oil research, I explored alternative energy systems that could replace oil. While many were technologically feasible, I found that little had been done to develop alternatives of a scale sufficient to replace oil—an infrastructure-rebuilding effort that will take decades to complete. With over 96 percent of our transportation system fueled by oil-based energy, it didn’t take a rocket scientist to figure out our predicament. The demand for oil—the mother’s milk of economic growth—will soon outstrip supply, and we have no alternative energy systems ready to pick up the slack.

I also discovered the intertwined linkages between energy, the environment, and the economy necessitated a comprehensive solution. Furthermore, the challenge of sustaining a growing population amidst freshwater shortages, loss of arable land, and skyrocketing agricultural costs would compound the problem.

The picture turned murkier as I assessed the political will and economic capacity—or lack thereof—of the United States and other nations to take on the daunting challenges. Sadly, their respective debt-ridden balance sheets appeared as problematic as their lack of political interest in even beginning to address the threat. It is far easier, it seems, to deny the problem, cling to technological panaceas, or pass the problem on to others—sure prescriptions for disaster.

I wondered what would happen to the American Dream when the dream enablers—cheap energy and abundant resources—no longer existed. Are we prepared for the lifestyle changes that will surely follow?

Believing that the best way to learn about something is to teach or write about it, I opted for the latter. I have written and spoken out on issues pertaining to the perfect storm, but the message gets obfuscated in PowerPoint presentations. It's a complex story, not conducive to sound-bite explanations, and it left me in search of better ways to get the message across.

I decided to write a novel, *Lethal Trajectories*, as a way of showing what events might transpire in the coming years to produce the perfect storm. Written as a techno-thriller, but based on years of research, it includes my research notes for the more-than-casual reader. I also built a website, [www.WeatheringtheStorm.net](http://www.WeatheringtheStorm.net) to address these issues on an ongoing basis, and I have prepared this guide as a tool to help others think through the challenges of the looming storm.

*Weathering the Storm* draws from my own personal experiences and includes several of the charts, diagrams, resource materials, and step-by-step processes I myself have used to prepare. Hopefully, it will help others interested in doing the same.

—Mike Conley

# AWARENESS

“You cannot solve this world’s problems with the same thinking that created them.”

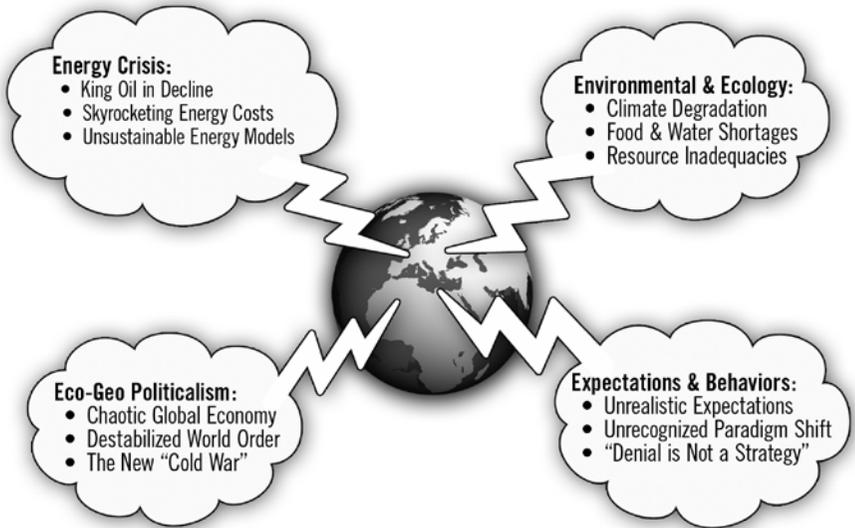
—ALBERT EINSTEIN—

## **The Gathering Storm**

Look around. The storm clouds are everywhere. We see them in the chain of uprisings in the Middle East and Africa. We fear them as gasoline prices escalate and our addiction to oil threatens national security. We feel the ongoing effects of the 2008 economic meltdown and nervously watch the purchasing power of our dollar erode as crushing debt loads threaten our economy and all entitlement programs. We are befuddled by terrorism, nuclear proliferation, and religious uprisings. We are uneasy about rising food prices, freshwater shortages, and climate-induced weather patterns that exacerbate ever more frequent and destructive storms and droughts. We even question Earth’s capacity to sustain a growing population.

Still basking in the American Dream, we have yet to acknowledge that the enablers of that dream are disappearing. For the first time in centuries, new generations are not expected to live as well as the previous ones. In vain, we seek old-paradigm solutions to fix new-paradigm challenges and struggle with the disconnect.

# THE PERFECT STORM



## The Perfect Storm Described

As the above chart illustrates, there are four sets of colliding forces that could unleash a chain reaction of unimaginable scope, intensity, and duration: the perfect storm.

- 1) **Energy:** The supply of oil, a finite resource, will soon be in decline or unable to keep pace with growing global demand. The ripple effect of an inverse supply-and-demand curve will drive up *all* energy costs, and the ensuing shortages will curtail economic growth. With no *scalable* energy systems in place to replace oil, we will be in a race against time to replace dwindling oil supplies with alternative energy fast enough to avert an economic meltdown. The prognosis is poor, and the national security implications are ominous.
- 2) **Environment:** The visible manifestations of climate change are evident everywhere: in the permafrost melts now releasing huge quantities of methane; in record ice

or ice shelf melts in the Arctic, Antarctic, Greenland, and the Himalayas; in the rising acidity of the ocean and the destruction of life-giving coral reefs; in bizarre and costly weather patterns; and in widespread droughts and famine. Military and intelligence analysts, in fact, consider climate change to be a “threat multiplier” that exacerbates sensitive geopolitical situations.

- 3) **Economic and geopolitical strife:** A global economic realignment is taking shape as the United States, the European Union, Japan, and others struggle to manage their debt-ridden economies while China and oil-producing countries amass enormous wealth. A new “cold war” has arisen between China and the Western nations, with control of resources and world markets—not ideology—as the main points of contention. Trade imbalances, unwise fiscal and monetary policies, and mountains of red ink continue to destabilize the geopolitical environment.
- 4) **Expectations and behaviors:** Shaped by the American Dream of unlimited prosperity, our world will change as the dream enablers disappear. The psychic disconnects between old-paradigm expectations and new-paradigm realities will create unparalleled personal challenges on a global scale.

## The Storm Unfolds

While it is difficult to predict the precise arrival time or the event(s) triggering the storm, two things seem clear: first, we will experience unprecedented hardships over a long period of time, and second, we are woefully unprepared for the encounter. The following chart illustrates the dynamic impact of the storm, summarizing the continuum shifts we might expect to see as the perfect storm unfolds.

### ***Perfect Storm Continuum Shifts:***

<b>Pre-Storm Conditions</b>	<b>During the Storm</b>	<b>After the Storm</b>
Cheap and abundant energy	Oil supply declines and prices skyrocket; global conflicts arise over oil	Economic chaos as new energy paradigms take hold amidst shortages
Transportation systems are fueled mainly by oil	Transportation systems disrupted by growing oil shortages	Rocky transition to new transportation systems in a race against time
Thriving global economy and marketplace	Fuel costs act as a de facto tariff; decline of global trade and travel	Deglobalization; new focus on local, regional economies
Signs of climate change are manifest	Bizarre and costly weather patterns intensify with harsh global repercussions	Draconian adaptation plans needed to lessen climate-change impacts run amok
Ample food, water, and material resources	Water shortages, famines, and faltering crop production	Population declines as wars and famines take their toll
Growth-oriented, throwaway culture	Massive shortages at all levels; growing emphasis on basic survival needs	New credo: downscaling, reusing, repairing, and recycling
U.S. dollar reigns supreme as its global <i>fiat</i> reserve currency status remains intact	The dollar, under attack, is devalued; entitlement and fixed asset values at risk.	New reliance on hard assets; U.S. petrodollar and <i>fiat</i> reserve status is challenged
Institutional safety nets in place; government is generally responsive	Governments overwhelmed by new demands; systems falter and civil unrest follows	Self-reliance at local levels grows; dependence on government wanes
The American Dream prevails	Radical lifestyle changes as the dream enablers disappear	Emergence of a new back-to-basics lifestyle and focus

## **The Grim Reality**

Ideally, our leaders would recognize the threats and respond, but that isn't going to happen. Why? Look in the mirror. We are culturally wired to seek quick fixes and pain-free solutions, our lines of sight seldom extending beyond the next election or quarterly earnings cycle. The perfect storm, unfortunately, is too complex to

explain in a sound bite or resolve with a quick fix. Our political leaders, fearful of getting too far ahead of the curve, find it easier to deny the threat, kick the can to future generations, or cling to the misguided belief that technology can fix everything—all surefire prescriptions for disaster.

## **The Message**

Don't wait for our leaders to act. There is much we can do—must do—to prepare for the storm, the sooner the better. Let's talk about it.

# ENGAGEMENT

“Small deeds done are better than  
great deeds planned”

—PETER MARSHALL

The implications of my research were frightening, and I knew I needed a plan for addressing the perfect storm. But it was all new to me. Where does one start?

I began by using the perfect storm schematic on page 5 to develop a design construct and then related the four macro forces in the schematic to what I had to do *at a personal level* to get prepared. Here is my list:

- 1) **Energy:** Rightsizing my energy patterns to do more with less.
- 2) **Environment:** Reducing my carbon footprint as climate change intensifies.
- 3) **Economics:** Positioning my finances for the new economic landscape.
- 4) **Expectations:** Changing my behaviors and lifestyle to conform to new realities.

In researching the interaction of these forces, I was flabbergasted to discover that one gallon of gasoline produced twenty pounds of carbon dioxide. The science behind it helped me to truly appreciate the interrelatedness of energy, environment, economics, and expectations. Let me share the science with you and then relate the epiphany it evoked in me.

### ***How can one gallon of gasoline produce 20 pounds of carbon dioxide?***

It seems impossible that a gallon of gasoline, which weighs about 6.3 pounds, could produce 20 pounds of carbon dioxide (CO<sub>2</sub>) when burned. However, most of the weight of the CO<sub>2</sub> doesn't come from the gasoline itself, but the oxygen in the air.

When gasoline burns, the carbon and hydrogen separate. The hydrogen combines with oxygen to form water (H<sub>2</sub>O), and carbon combines with oxygen to form carbon dioxide (CO<sub>2</sub>).

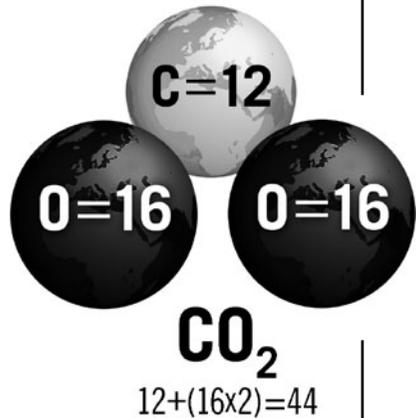
A carbon atom has a weight of 12, and each oxygen atom has a weight of 16, giving each single molecule of CO<sub>2</sub> an atomic weight of 44 (12 from carbon and 32 from oxygen).

Therefore, to calculate the amount of CO<sub>2</sub> produced from a gallon of gasoline, the weight of the carbon in the gasoline is multiplied by 44/12 or 3.7.

Since gasoline is about 87% carbon and 13% hydrogen by weight, the carbon in a gallon of gasoline weighs 5.5 pounds (6.3 lbs. x .87).

We can then multiply the weight of the carbon (5.5 pounds) by 3.7, which equals 20 pounds of CO<sub>2</sub>!

*Source: [www.fueleconomy.gov/feg/climate.shtml](http://www.fueleconomy.gov/feg/climate.shtml)*



My epiphany: I once owned a Piper Archer III airplane and would fly about 150 hours a year, on average. My plane burned about 10 gallons of high-octane aviation fuel per hour, or 1,500 gallons per year. Using the carbon footprint chart, I was horrified to discover that this petro-burn emitted 15 tons of CO<sub>2</sub> into the atmosphere. With a shelf life of at least a hundred years, my emissions will be in the atmosphere throughout the lifetimes of my grandchildren and their children. Not much of a legacy for a grandfather to leave, is it? I sold my plane and no longer fly privately. In doing so, I found that by saving energy, I could also reduce my carbon footprint, save money, and leave a better world for my grandkids. What's not to like about this?

## Developing a Plan

Getting started on a plan was probably the toughest challenge of all, but I quickly discovered it wasn't rocket science. In fact, I was pleasantly surprised by the plethora of resources available to help me develop a plan. Through trial and error, I developed a five-step process, one that I would use if I were starting all over again.

### *Step 1—Establish an Energy Baseline*

Start with a simple energy audit. It's a great diagnostic tool and sets the stage for all other metrics. I kept mine simple by focusing on the energy I used most often: gasoline, electricity, and natural gas. The data was accessible and easy to calculate.

The gasoline part is easy: check your car odometer for miles driven and work backward to calculate the gallons of gas that you used. Along with the costs, your electric bill should provide the monthly kilowatt hours used, and your natural gas bill should show the therms used monthly. (The same approach can be used for other forms of energy such as propane, coal, and heating oil.) The data can then be organized and tallied under the following columns:

**Month:, Gallons Used:, Kilowatt Hrs:, \$Cost:, Therms:, \$Cost:**

## ***Step Two—Carbon Footprint Analysis***

With this baseline energy data, you are ready to calculate your carbon footprint. The carbon footprint calculation requires little more than entering variations of this information into one of the free calculators available on the Internet. You will immediately receive a personal carbon footprint report with cost numbers and usage patterns relative to a larger population base. The illustrations also provide useful energy and cost-saving hints. Here are some of the online resources available:

- **The Minnesota Energy Challenge** offers an excellent carbon-footprint calculator and many other resources at [www.mnenergychallenge.org](http://www.mnenergychallenge.org). Minnesota residents can create an account and easily calculate a basic carbon footprint, build a customized list of energy-saving actions, and access tools and resources to help reduce energy waste at home. While geared to Minnesota energy-use patterns and cost structures, there is plenty of good information there that can also be useful for out-of-state residents.
- **The Nature Conservancy** offers state-specific carbon footprint audits. Find your information at [www.nature.org/greenliving/carboncalculator/](http://www.nature.org/greenliving/carboncalculator/).
- Check out your local utility company's website for additional data and energy tools. In Minnesota, for example, both Xcel Energy and CenterPoint Energy provide a number of online inventory services and audit information, along with a menu of practical ideas for reducing energy costs and carbon footprints.

### ***Step Three—Crafting a Plan***

With this information, you are ready to develop a plan. There are many ways to craft a plan consistent with your vision, goals, budget, timetables, and level of motivation. Let me now suggest a process for developing a plan.

Begin with a vision—a personal view—that can be stated in precise terms, such as, “I want to chop my energy costs by 20 percent” or “I want to cut back my household energy consumption by 15 percent.” It might also be phrased in more nondescript terms, such as, “I want to be positioned to weather the perfect storm.” Whatever the vision, it will provide a compass and sense of direction. You are no longer rudderless.

With a vision of where you want to go and knowledge of your starting point, you can determine the gaps between your actual and desired performance. In effect the gap becomes the basis for establishing your performance goals and metrics. (For example, if your vision is to reduce electrical consumption by 10 percent, and you are now using 1,000 kilowatts, a reduction of 100 kilowatts will become the target metric you use to develop your plan.) Initial targets might include the low-hanging fruit—the simplest changes with the greatest cost/benefit potential. For me, three target areas came to mind: household energy savings, transportation savings, and “self-sufficiency” initiatives, with the latter being a longer-term goal.

- 1) **Household energy savings:** In a typical Minnesota household, approximately 55 percent of all energy is expended on heating and air conditioning; 20 percent on lights; 15 percent on appliances; and 10 percent on water. The opportunities for energy and money savings in these areas are enormous. An easy and effective way to check out household energy efficiency and identify areas for improvement is to contact your utility company or an independent service for a low-cost energy audit. They will help you target, cost out, and prioritize areas for

improvement. Their suggestions often require little more than a behavioral change. The chart below describes some of the more common initiatives.

Smaller Initiatives	Medium Initiatives	Larger Initiatives
Turn thermostats down 2°	Install CFL or LED bulbs	Replace furnace
Wash clothes in cold water	Use programmed thermostats	Replace water heater
Take 5-minute showers	Use low-flow showerheads	Add new insulation
Turn off lights not in use	Weather strip and plug air leaks	Use Energy Star products
Set water heater to 120°	Clean/replace air filters	Install a smart meter
Unplug electronics not in use	Schedule a home energy audit	Install solar or geothermal energy systems

**2) Transportation:** There are multiple ways to trim fuel consumption and reduce carbon footprints without changing the way we live. Some examples:

Smaller Initiatives	Larger Initiatives
Keep tires pumped up and car maintained	Purchase a more fuel-efficient car
Stay within speed limit; avoid rapid acceleration	Move closer to workplace, market centers, or transportation hubs
Walk and bike; avoid unnecessary driving	Use carpools and public transportation
Rethink long driving vacations	Teleconference and change meeting routines

**3) Self-Sufficiency Initiatives:** This has been the most challenging area for me and requires an explanation. In a society totally dependent on machines, automation, and cheap energy, I take so much for granted. For example, I drive to the supermarket, where I expect to buy fresh food; I turn on the faucet and expect to get purified water suitable for drinking; I flip a switch and expect power to cool my house and to run my appliances, computer, and TV; I reset my thermostat for more heat on a cold night and assume there will be plenty of hot water for my shower. I don't worry about sewage disposal, and I know I can count on a weekly trash pickup to haul away the

prodigious amounts of material I throw away without a second thought.

Electrical power outages, though infrequent, remind me of how utterly dependent I am on cheap energy and services provided by others. Could I survive, I wondered, if I had to live by my own hands like my forefathers? In the perfect storm, these services are unlikely to be available to the extent they are now. My ability to cope would be poor because I lack the skills needed to replace these dependencies and get by on my own.

In my previous career I had learned to evaluate risks and find ways to mitigate them. The unprecedented risks of the perfect storm prompted me to approach it with the belief that I should “plan for the worst but hope for the best.” It required, in essence, a formal plan to develop and hone my self-sufficiency skills in the coming years. My plan now includes:

- Identifying and developing the back-to-basics skills I would need to survive a catastrophic breakdown in the system. This includes learning how to provide for my own water, heat, lighting, cooking, sanitation, and transportation needs.
- Growing a little food-producing victory garden in my backyard, an easy and enjoyable way of getting started.
- Practicing conservation now and initiating behavioral adjustments to practice getting by with less
- Developing an aptitude and skill sets for recycling, reusing, and repairing wherever possible. This will include such things as simple household, auto, and bike repairs

### ***Step Four—Financial Preparations***

Our nation is drowning in a sea of red ink. The insidious creep of debt is transforming the economic landscape and rendering previous financial truisms obsolete. Our addiction to buying products we don't make, with devalued and borrowed dollars we don't

have, is as unsustainable as providing unfunded entitlement benefits to an ever increasing number of Americans financed by a smaller base of workers. Deficit spending, while intoxicating on the way up, will be devastating on the way down.

Financial planning in this environment is a crucial but complex exercise and may require the counsel of a trusted financial planner. My intent here is *not* to offer financial advice, but rather to suggest a few assumptions to consider in planning for the storm.

Energy costs will skyrocket as oil supply tightens. Industry sectors with high fuel-cost structures will be particularly vulnerable. Consumerism will suffer as families redirect larger amounts of their discretionary income toward fuel, food, and heat. Think about how these trends will effect your investments and lifestyle:

- Social Security and Medicare entitlement programs will be further stressed and underfunded as baby boomers flood the entitlement arena. Such programs are likely to reduce benefits and increase costs. In this arena, something has to give, and you are likely to be affected—beware!
- Government borrowing to finance deficits and service debt will further weaken America's balance sheets. Strapped for cash, the government will print more money, monetize debt, and seek new revenue sources wherever possible. The current deficit trajectories are unsustainable.
- The ripple effect: as the dollar devalues and commodity prices linked to the dollar skyrocket, the true value of our investment return—based on the purchasing power of the devalued dollar—will decline. Those on fixed incomes are bound to suffer.
- Beware of stagflation: the escalating costs of energy and food will absorb consumer spending. With fewer discretionary dollars available to fuel our consumer-based economy—dependent on consumer spending for about 70 percent of its GDP—economic growth could easily stagnate with chronically high unemployment rates.

Stagnant economic growth plus a rising cost of living equals stagflation.

In an economic landscape laden with these financial landmines—any one of which could decimate a financial portfolio—it is difficult to find a safe haven for our hard-earned dollars. Some considerations:

- Prepare for financial disruptions. Improve your cash flow and liquidity position; reduce expenses and learn to live with less. (Step 1-3 will help)
- Beware of long-term fixed investments. For example, a thirty-year T-Bill paying 3 to 4 percent per annum against a dollar that devalues by 3 to 5 percent per year could render the *real* purchasing power of your investment return an absolute loser over time.
- Beware of paper currencies. Make sure your precious-metal and hard-asset positions are an important part of your investment and savings portfolio.
- Look for new investment opportunities. Try to visualize how various sectors of the economy will fare in the perfect storm and think out how the business models of sectors you have invested in will perform in the new environment. A good litmus test question to ask is this: “How well will the asset or sector I’ve invested in perform in an economy where gas prices top eight bucks a gallon?” Some sectors will thrive while others flounder. It will pay to know the difference.
- Pay close attention to the underlying drivers of your investment. An investment sector—like an iceberg—is moved by invisible forces below its waterline. Fixation on the tip of the iceberg, to the exclusion of the underlying forces driving its performance, degrades the investment-review process. The following schematic provides an illustration of the types of below-the-waterline forces to consider:

## TIP OF THE “INVESTMENT” ICEBERG

### As Investors, We Often:

- Fixate on the tip of the iceberg
- Overlook “below the waterline” drivers
- Ignore the global forces that push our investments

### TIP OF THE ICEBERG:

- Herd mentality
- Short-term fixation
- Arcane ratios, formulae, and past performance

### Global Forces:

- King Oil in decline
- Competition for scarce resources “The New Cold War.”
- Climate change: Droughts, famines and aberrant weather
- Geopolitical instability

### BELOW THE WATERLINE:

- Energy costs & shortages
- Monetary & fiscal policy mess
- Unfunded liabilities & debt
- Loss of manufacturing base
- Consumer morass and devalued dollar

### *Step Five—Expectations and Behaviors*

We are operating in uncharted waters and know little about how we will react emotionally to the prolonged trauma of the perfect storm. One can only conjecture about how expectations and behaviors will change; recognizing and recalibrating our mindsets may well be the most difficult challenge we will face. Some thoughts to keep in mind:

- Lifestyles will change as we are forced to live with less. Our insatiable quest for growth, speed, power, and size—the bigger-is-better fixation—will, by necessity, be superseded by a back-to-basics recalibration of our lifestyles.
- Urban residents will migrate to downscaled housing located closer to public transportation hubs, water sources, worksites, and areas of commerce as energy costs skyrocket. Suburban and exurban populations are likely to decline.

- The capacity of government at all levels to care for the growing needs of its citizenry will diminish. The gaps in service will cause hardships, and desperate people do desperate things; the likelihood of civil unrest will grow. It happened in America during the Great Depression, and one can only imagine the possibilities as the perfect storm progresses.
- As the crisis deepens, deglobalization intensifies, energy costs and resources tighten, and traditional institutions falter, mobility will decline and lifestyles will change from complex to simple. Solutions will be increasingly sought at a local, community level—with less dependence on the national government—and a premium will be placed on our self-reliant abilities to grow food, repair, recycle, and reuse. A back-to-basics shift will replace our current culture of conspicuous consumption. We will have no other choice.

Our ability to weather the storm will require recognition and acceptance of our new paradigms. With our new back-to-basics focus, we might find ourselves looking more like early twentieth-century pioneers than the ultra-modern, high-tech people we are today. Unfortunately, many of the survival skills that sustained our ancestors have been lost—skills we may have to relearn as we adjust to our new realities.

This five-step guide is meant to provide a starting point for getting mentally, physically, financially, and behaviorally prepared for the perfect storm. Spiritual preparation, it would seem, is also a crucial consideration, but one outside the bailiwick of this guide.

A word of caution: without effective execution, a plan is nothing more than a piece of paper and a waste of time. It's your plan, and you have the latitude to design it in any way you choose. My only advice is to just *do* it. Don't let perfection stand in the way of progress. Once you start, you will find and make improvements as you move along. You will also establish a track record and gain confidence as you progress. Eventually you will find ways to leverage your efforts with others. The next chapter describes how this might be done.

# LEVERAGE

“A small group of thoughtful people  
could change the world.  
Indeed, it’s the only thing that ever has.”

—MARGARET MEAD

I use the word *leverage* to describe all of the activities that enhance our efforts to counter the effects of the perfect storm. Leverage includes educational and planning tools, networking and technical support, and public-policy awareness. The abundance of available resources reminds us that we are not alone. The challenge is to find the resources most compatible with your own personal mission and style.

For illustrative purposes, I will mention some of the resources that have helped me. The information is divided into three parts: plan development and implementation resources; leveraging activities; and public-policy participation.

## **Plan Development and Implementation Resources**

In researching and writing about the perfect storm, I have found a number of helpful books; their titles are listed at the end of this work in a selected bibliography. Early on, I joined the Association for

the Study of Peak Oil ([www.aspousa.org](http://www.aspousa.org)) and found it to provide a treasure trove of information on energy and collateral issues. Internet search engines provided another invaluable tool, and I regularly read articles, data, and newsletters from the following sources:

Source:	Provides:
Oil Drum:	Analysis on peak oil and energy-related issues
Energy Bulletin:	Analysis on peak oil and collateral issues
Energy and Capital:	Research and financial/investment information on energy and related fields
IEA Oil Market Report:	Global perspectives on energy/climate-change issues
EIA Short Term Energy Outlook:	Official government energy statistics

The Minnesota Energy Challenge plan, developed by the Center for Energy and Environment (CEE), was an invaluable planning tool. The “Challenge” is a computer-based program to educate and engage individuals and communities in addressing their use of energy and the carbon footprint their patterns produce. In addition to providing the annual totals of greenhouse-gas emissions and money savings for each user’s energy-saving actions, it can aggregate the data into a tally by teams. Teams can be organized in a community, worksite, church, school, or any host group; groups then compete in a positive and motivational atmosphere. The effort has produced remarkable results, and the friendly competition has helped build personal awareness about the issues and solutions. For more information, visit [www.mnenergychallenge.org](http://www.mnenergychallenge.org)

## Leveraging Activities

Over time, I looked for ways to leverage my efforts with others. I will mention here a few of the organizations I have worked with to illustrate the scope and diversity of the field. Each of these groups work toward a cleaner energy environment and see the economic and social value in their work; all provide access points and opportunities for concerned citizens. There are many other fine organizations out there that will align with your unique interests and desires.

**The Will Steger Foundation:** Founded by National Geographic Arctic explorer Will Steger, the organization's mission is to educate, inspire, and empower people of all ages to take action to address our climate crisis. They are particularly active with educators (K-12) in developing and supporting curricula, professional development opportunities, and action resources, as well as encouraging youth leadership at the high-school and college levels. They also work to pass strong climate and clean-energy policies in Minnesota as well as regionally, nationally, and internationally. Their programs provide authentic eyewitness accounts of climate change with unique opportunities for public interaction. They are a major go-to resource for climate-change information. [www.willstegerfoundation.org](http://www.willstegerfoundation.org)

**EnerChange:** Founded in 2007, EnerChange pursues a mission to “transform knowledge into action—in the form of energy conserving practices among its clients.” EnerChange helps nonprofit organizations make their buildings more energy efficient while reducing their energy costs and carbon footprints. The results to date have been extraordinary. [www.enerchange.org](http://www.enerchange.org)

**The Great Plains Institute:** GPI was formed in 1997 to accelerate the transition to a renewable and low-carbon energy system and a society that is sustainable and prosperous over generations. It conducts research, provides reliable information to decision-makers, helps demonstrate new energy technologies, and specializes in using consensus-building and dispute-resolution techniques in finding and implementing practical solutions to society's energy challenges. As a nonpartisan group of “energy diplomats,” GPI proactively engages leaders of all kinds to develop consensus—then action—on policies and techniques that will accelerate the clean energy transition. Their collaborative approach has had great success and is the very essence of leverage. [www.gpisd.net](http://www.gpisd.net)

**Summit Academy OIC (SAOIC):** Summit Academy provides vocational training for adults residing in economically depressed neighborhoods. “Green-collar” jobs and weatherization-training programs are embedded in their construction trades training program, and they have initiated aggressive energy-conservation programs within their facilities. Their mantra, “the best social program in the world is a job,” is enhanced by the green-job training and placement services they provide. [www.saoic.org](http://www.saoic.org)

## Public-Policy Participation

Time is running out; we can’t afford to wait for the government to act before we develop our plans for weathering the storm. We also have an obligation to do what we can at a grassroots level to influence public policy. It’s not rocket science, but it does take an effort. There are three things we need to do to crank up our involvement:

- 1) **Identify the key issues:** Upon completion of your plan, you will have a better idea of the critical issues involved in weathering the storm. Getting familiar with the issues and staying current is important; knowing where your elected representatives stand and holding them accountable is crucial.
- 2) **Seek affinity groups:** Groups that represent your interests are able to formulate positions, generate critical mass and publicity, and garner the ear of political leaders in ways that are difficult for an individual to do. Politicians understand voting power, and there is far more leverage in working with effective coalitions than in solo efforts. As your planning evolves, you will find organizations that share your beliefs. Don’t be shy: look for them, ask questions, do your homework, and then go for it.
- 3) **Get engaged:** Once you have selected an organization you like, get engaged. Attend their meetings; draw on

them for help; support their efforts; network with other members; contribute of your time, talent, and treasury; contact your congressional delegates and make them accountable. As you become part of a larger group, you will find ways to contribute and leverage your efforts with others for greater effectiveness. It's a win-win situation.

In summary, the power of leveraging with others is huge. It provides a reinforcing reminder that we are not alone. It is also the basis for grassroots efforts that can change public policy and foster initiatives to meet the challenges of the perfect storm. There are ample opportunities for public-policy engagement, but it takes an effort. Before criticizing our political leaders, let's first look in the mirror to see if we are doing our part. In the political arena, the phrase "out of sight, out of mind" is a reminder that our presence is needed and our votes count. The next section will suggest an advocacy approach.

# ADVOCACY

“You can always count on Americans  
to do the right thing—  
after they’ve tried everything else.”

—WINSTON CHURCHILL

As a society plugged into immediate gratification, quarterly earnings, and winning the next election, we are ill-prepared to address challenges beyond the short term. The threats of the perfect storm, unfortunately, are long, deep, and wide—not amenable to quick fixes. We are missing the forest for the trees.

Without a comprehensive national strategy—one with teeth—to address our long-range energy, economic, and environmental challenges, we are at great risk. While the perfect storm will eventually force us to do what we must, it may by then be too little and too late. In the meantime, we are wasting valuable time. Advocacy is crucial. Let’s get started.

## Principles of Engagement

At the height of the economic meltdown in 2008 and 2009, I explored the feasibility of addressing the perfect storm and developed a plan entitled *Vision 2020: A Blueprint for Achieving Energy*

*Independence in an Environmentally Clean and Economically Viable World.* While the full plan is too lengthy to cover in this guide, I will suggest a few principles of engagement from that report underpinning the policy solutions we should consider.

- Face reality as it is. Current energy, environmental, and economic trajectories are unsustainable. The quicker we internalize this fact—deep in our hearts—the faster we can build the political will needed to effectively engage.
- Target the storm. The magnitude of the perfect storm requires it be addressed strategically and in its *entirety*. Fragmented efforts could actually be harmful; the storm is not amenable to sound-bite solutions and quick fixes.
- Recognize the scope of the threat. The enormity of the challenge will require an effort and commitment comparable to America's transformational effort to win World War II. It can not be addressed without pain and sacrifice, and this should be understood up front.
- Position to win. The three imperatives for change are intertwined and compelling:
  - 1) Our addiction to foreign oil is a national security threat,
  - 2) Our economic vitality is dependent on developing clean new energy models, addressing climate change, and getting our financial house in order, and
  - 3) Our intergenerational responsibility for leaving behind a healthy planet and sustainable way of life for our grandchildren is beyond question.
- Collaborate. The storm's complexity requires a collaborative, bipartisan effort. We must seek optimal—not perfect—solutions and put ideological dogma on the back burner. Today's political gridlock complicates the task.

- Use the 2% Rule. Grand-slam homeruns and panaceas are long shots. Success will ultimately come from 2 percent solutions here and 2 percent solutions there that are *tied to a common vision and comprehensive strategy*—something that is sadly lacking today.
- Establish metrics and accountability. We can't achieve what we don't quantify and measure. We all have a role to play and are accountable in some manner.

Sadly, ideology, special interests, political polarization, short-term thinking, and an unhealthy attitude of denial and procrastination stand in the way of progress. While a cataclysmic event of Pearl Harbor proportions might jolt us into action and change our thinking, the slower—but more insidious—creep of the perfect storm's trajectories is blinding us to the threat. Our job is to build awareness and generate change, both of which are most likely to occur at the grassroots level.

# CONCLUSIONS

“A pessimist sees the difficulty  
in every opportunity;  
an optimist sees the opportunity  
in every difficulty.”

—WINSTON CHURCHILL

Writing this guide has forced me to review my past efforts—some good, some bad, and some ugly—and focus on the essentials and those things that have worked. By sharing my experiences, I hope to awaken you to the challenges of the perfect storm and the need to address them. This is not meant to be a one-size-fits-all guide, but rather a working model to help you think through and develop your own personal plan of action.

If I could wave a magic wand, there are a few key impressions I would hope to leave with you:

- 1) **A perfect storm is rapidly approaching**, and it will forever change our lives. It won't go away. We can't get around it; we can only go through it. It will present challenges the likes of which we have never seen before and will affect us in ways we never could have imagined. Warning signs

are appearing with growing frequency and intensity; the storm cannot be far away.

- 2) **How we come out of the storm is an unknown**, but there are things we can do up-front to mitigate its sharper edges. Unfortunately, its stealthy nature obfuscates the threat it poses and hinders us from acting. Time is working against us; every precious day wasted intensifies the storm's awesome potential.
- 3) **We are not helpless victims.** There is much we can do to prepare, but it requires a) an awareness of the threats we face, b) a willingness to engage in the challenge and develop a plan of action, c) an effort to leverage our activities with others to produce the most optimal result, and d) stepping up to the plate in an advocacy effort designed to awaken others to act on the looming threats.
- 4) **An effective response will involve pain and sacrifice**, but the pain of doing nothing will be far worse. There is much we can still do if we are willing. Will we deny there's a problem? Kick the can down the road? Pin our hopes on technology to do what can't be done? Or, will we do something about it? Time is running out.

## A Message of Hope

While we face a tough future for many of the reasons mentioned, there is a message of hope: it doesn't have to be this way. Instead, like the mythical phoenix, we can rise from the ashes of our challenge, its fire a catalyst for rejuvenation and the creation of multiple new economic engines of growth and a healthier environment.

America has a long history of overcoming great challenges: winning World War II, putting a man on the moon, and winning the Cold War, to name a few. Can we do it again? Clearly, the imperatives and opportunities for transformational change have never been greater.

Imagine if you will the transformational impact of a new clean-energy infrastructure not reliant on foreign oil; an economy that features America's technological and innovative prowess, in which we once again make and export products of value; a nation that lives within its means and is at the forefront of efforts to create a sustainable environment for future generations; a nation that finds its greatness once again. It is doable, if we can only escape the gravitational pull of our short-term thinking.

The following initiatives offer a few examples of how a galvanized America can create a resurgent economy with dramatic new multiple engines of growth:

**Conservation practices:** Redirect technological and innovative efforts toward energy conservation, building retrofits, and clean-energy programs. Institute crash research and educational programs to intellectually fuel America's robust new clean energy infrastructure.

**Electrical transformation:** Build a new, national electrical "super highway" grid system with efficient long-distance transmission lines, "smart-grid" connections, energy-efficient power stations, and smart meters. Comparable, if you will, to the Eisenhower Administration's national highway-building program in the 1950s.

**Renewable energy:** Fast-track development of renewable power systems and alternative fuels, including wind, solar, geothermal, biomass, hydrogen, and newer nuclear technologies. Use natural gas as a bridging or transitional fuel to new hydrogen-based and/or other energy systems later in the century.

**Transportation rejuvenation:** Ramp up public transit and national high-speed rail systems. Transition to electrical cars and/or fuel-efficient hybrid autos and trucks and wean ourselves from our almost total reliance on oil-based fuels.

**Synthetics:** Seek synthetic replacements for petroleum-based products used in paints, plastics, fertilizers, herbicides, lubricants, and so forth.

The above initiatives, while significant, are technologically *feasible* and *doable*. They will require a shift away from our current short-term thinking, as well as regulatory and tax reforms aimed at taking the uncertainty out of the system. We will need to once again believe in our ability to conquer the unconquerable and be willing to pay the price for a better future. With the promise of energy independence, a cleaner environment, and economic rejuvenation, our number-one workforce problem might well be to fill labor *shortages*, not struggle with high unemployment rates—a nice problem to have.

Getting back to the basics and a saner lifestyle may not, after all, be the worst thing that could happen to us.

There is much we can still do to prepare for the storm, and I hope this guide will stir your creative juices and trigger a proactive response. I wish you the best as you plan for the future and hope you will stay in touch through my website: [www.WeatheringtheStorm.net](http://www.WeatheringtheStorm.net).

—Mike Conley

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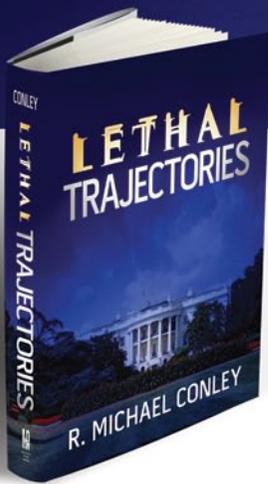
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# LETHAL TRAJECTORIES

“You are talking about a perfect storm . . . Inexorable forces of tectonic proportions in collision all at once: the energy crisis, terrorism in Saudi Arabia, economic chaos, and climate-change. Every one of them is on a lethal trajectory, all of them about to converge.”

The year is 2017, and a crisis of catastrophic proportions is in the making. A conflict over oil has brought China and Japan to the brink of war—igniting a global chain reaction; the Saudi Arabian government is overthrown by a regime using oil as an economic weapon of mass destruction to blackmail the world. The chaos is compounded by terrifying new climate change information, a floundering global economy, and a terminally-ill U.S. president. All the while, a small-town pastor tries to bring unity to her community—frightened citizens of Middle America—as gas prices skyrocket, the economy craters, and lifestyles around the globe change almost overnight. The clock is ticking as the two superpowers, China and the United States, decide whether to approach this perfect storm as friends or adversaries.

Please visit: [www.WeatheringTheStorm.net](http://www.WeatheringTheStorm.net)



**Mike Conley** currently serves as chairman and CEO of the Conley Family Foundation and is actively involved on a number of boards and advisory groups. He is a former insurance executive and public policy activist. Conley graduated from the University of Minnesota in 1967, after serving in the United States Navy, and later completed a postgraduate program at Stanford University. He and

his wife, Sharon, have two daughters and two grandchildren and reside in Plymouth, Minnesota, a suburb of Minneapolis.